

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### Pribbs Steel & Mfg., Inc.

#### North Dakota Manufacturing Extension Partnership

#### A Partnership for Success

##### Client Profile:

Pribbs Steel & Manufacturing, Inc. was started in 1979 as an agriculture business to build short line equipment for the agriculture markets. Within a short time they were doing work in the construction industries and later expanded into government work with the Department of Defense. Pribbs has worked on many products that have required insight and engineering to help solve problems for the end user, including armor plating systems for U.S. Government vehicles, light/heavy trailer applications for the U.S. government and commercial markets, ancillary equipment which allows storage and access to their systems, and development programs for the U.S. Marine Corps. The company employs 130 people at its facility in Grand Forks, North Dakota.

##### Situation:

Pribbs Steel and Manufacturing is the sole supplier of Cargo and HIMARS bodies for the Medium Tactical Vehicle Replacement (MTVR) to Oshkosh Truck Corporation (OTC). OTC's demand for MTVR needs increased to 15 vehicles per week, and Pribbs found themselves unable to meet demands. This shortfall was causing OTC to lag in MTVR deliveries to the U.S. Marine Corp and negatively impacting revenues. Pribbs' initial position on their production shortfall was that additional capacity would need to be purchased; consequently, the costs would result in a significant price increase. Also, due to tooling lead time, the additional capacity would not be available in the near term. Pribbs contacted the North Dakota Small Business Development Center (SBDC), who in turn contracted with the North Dakota Manufacturing Extension Partnership (Dakota MEP), a NIST MEP network affiliate, to develop a Value Stream Map (VSM) of the body fabrication process.

##### Solution:

Working together, Pribbs and Dakota MEP defined Lean projects to address high level capacity roadblocks which included batch size reduction in primary operations, installation of welding raw material supermarkets, and addition of a fourth weld station to reduce welding Takt time. All three projects were implemented within three weeks. Due to the collaboration between Dakota MEP, Pribbs Steel and OTC, Pribbs was able to successfully meet OTC's requirements.

A second, more detailed VSM was developed of the revised process. A current State manufacturing critical path time (MCT) of 191 days was identified. Lean projects were defined to reduce the MCT to 57 days. This reduced MCT translated into a capacity of 20-plus bodies a week resulting in achievement of the project goal. Pribbs is continuing to tweak their production plan to both reduce MCT and increase capacity.

##### Results:

\* Reduced MCT by 78 percent, from 191 days to 57 days.

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- \* Increased production from 12 units per week to 20 units per week.
- \* Improved quality yield from 20 percent to 100 percent.

**Testimonial:**

"The Dakota MEP did an outstanding job. The ability to respond quickly and professionally was the key in success. The Dakota MEP is a preferred supplier of third party supplier development resources for Oshkosh Truck Corporation and our subsidiaries."

Sean Ketter, Manager, Corporate Supplier Development